Complete Summary

GUIDELINE TITLE

Other criteria for starting dialysis.

BIBLIOGRAPHIC SOURCE(S)

Other criteria for starting dialysis. Nephrology 2005 Oct;10(S4):S55-7.

Other criteria for starting dialysis. Westmead NSW (Australia): CARI - Caring for Australasians with Renal Impairment; 2005 Feb. 7 p. [10 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- End-stage kidney disease
- Dialysis

GUIDELINE CATEGORY

Management
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Nephrology

Nutrition
Pediatrics

INTENDED USERS

Dietitians
Physicians

GUIDELINE OBJECTIVE(S)

To review the available evidence pertaining to the other criteria for starting dialysis

TARGET POPULATION

Adults and children with end-stage kidney disease

INTERVENTIONS AND PRACTICES CONSIDERED

Initiation of dialysis (considered but not recommended)

- Absolute indications
- Relative indications
- Assessment of nutrition

MAJOR OUTCOMES CONSIDERED

- Malnutrition
- Glomerular filtration rate
- Mortality

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Databases searched: Medline (1966 to April Week 2 2004). MeSH terms and text words for kidney disease were combined with MeSH terms and text words for predialysis and referral. The results were then combined with the Cochrane sensitive search strategy for cohort and other prognostic studies.

Date of search: 28 April 2004.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Recommendations of Others. Recommendations regarding other criteria for starting dialysis from the following groups were discussed: Kidney Disease Outcomes Quality Initiative, British Renal Association, European Best Practice Guidelines, and Canadian Society of Nephrology.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the levels of evidence (I–IV) can be found at the end of the "Major Recommendations" field.

Guidelines

No recommendations possible based on Level I or II evidence

Suggestions for Clinical Care

(Suggestions are based on Level III and IV sources)

- Commence dialysis at first indication of malnutrition suspected to be due to uraemia and unresponsive to dietary intervention or correction of other reversible causes. (Level III evidence)
- Look for evidence of malnutrition once a glomerular filtration rate (GFR) of 15–20 mL/min/1.73 m^2 is found, and monthly from GFR < 10 mL/min/1.73 m^2.
- Use of 'absolute indications' for dialysis initiation is a historical concept which is no longer valid, and their presence suggests delayed initiation. However, in some patients with comorbid conditions, dialysis may be indicated for these reasons even when GFR is greater than 10 mL/min/1.73 m^2. Traditional absolute indicators include pericarditis, fluid overload and hypertension poorly responsive to non-dialytic treatment, hyperkalaemia, acidosis, advanced uraemic encephalopathy and/or neuropathy, significant bleeding diathesis, severe nausea and vomiting.
- Similarly, traditional 'relative indications' may not be useful because they are largely subjective and depend on patient perception and acceptance, and may be due to intercurrent diseases. Traditional relative indications include anorexia, profound fatigue and weakness, impaired cognition, memory and attention span, severe pruritus, depression and poor interpersonal relationships.

With regards to assessment of nutrition:

- For patients in nitrogen balance, dietary nitrogen (protein) intake (DPI) is equivalent to protein catabolic rate (PCR) + protein losses or urinary and non-urinary nitrogen appearance (PNA) + protein losses.
- Approximate normalised PCR (nPCR) may be calculated by the Randerson equation:

  nPCR (g/kg/d) = {[urea excretion (mmol/d) x 0.209] + 15.71} ÷ weight (kg) (see Appendix A in the original guideline document).

  For children, PNA can be derived by the modified Borah formula:

  PNA (g/d) = [urea excretion (mmol/d) x 0.209] + 0.294 x [V (total body water in litres)] + protein losses.

  - Corrected DPI can be calculated by multiplying nPCR by actual/ideal body weight. Ideal (dry) body weight can be determined from the table in Appendix B in the original guideline document.
  - Malnutrition may be suggested by:
    - Fall in lean body mass
    - Fall in serum albumin
    - Serum albumin below the lower limit of the reference range
    - nPCR < 0.8 g/kg/d
    - Subjective global assessment (SGA)
    - Other objective measures

(The components of SGA are listed in Appendix C in the original guideline document).

Definitions:

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate timing of initiation of dialysis in patients with end-stage kidney disease

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

1. Distribute to all members of the Australian and New Zealand Society of Nephrology (ANZSN) the formulae/nomograms for easy calculation of normalized protein nitrogen appearance (nPNA), corrected glomerular filtration rate (GFR), and Kt/V.
2. Monitor acceptance of the above "Suggestions for Clinical Care" by ANZDATA collection of entry normalized protein catabolic rate (nPCR) for all new patients commencing dialysis.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Oct

GUIDELINE DEVELOPER(S)

Caring for Australasians with Renal Impairment - Disease Specific Society

SOURCE(S) OF FUNDING

Industry-sponsored funding administered through Kidney Health Australia

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

All guideline writers are required to fill out a declaration of conflict of interest.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Caring for Australasians with Renal Impairment Web site.

Print copies: Available from Caring for Australasians with Renal Impairment, Locked Bag 4001, Centre for Kidney Research, Westmead NSW, Australia 2145

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- The CARI guidelines. A guide for writers. Caring for Australasians with Renal Impairment. 2009 Aug. 6 p.

Electronic copies: Available from the Caring for Australasians with Renal Impairment (CARI) Web site.

PATIENT RESOURCES

None available

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